



US-108  
SEQUENCE LISTING

<110> Ajinomoto Co., Inc.

<120> Inosine producing bacterium belonging to the genus  
Bacillus and method for producing inosine

<130> US-108

<150> JP 2003-37760  
<151> 2003-02-17

<160> 16

<170> PatentIn Ver. 2.0

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<223> Description of Artificial Sequence: primer

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33

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33

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<212> DNA

<213> *Bacillus subtilis*

<220>

<221> CDS

<222> (259)..(1113)

<400> 11

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agagaattta taacgggtta agaggcttct gcgatcaagt ttatgcggtg agaatgatcg 180
gcgaacagaa cgctcttgat taaatccgta tgtaagtta tattgatctt aaaatattcg 240
gattttgggg gtgagttc atg aag ttt cgt cgc agc ggc aga ttg gtg gac 291
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                1               5               10
tta aca aat tat ttg tta acc cat ccg cac gag tta ata ccg cta acc 339
Leu Thr Asn Tyr Leu Leu Thr His Pro His Glu Leu Ile Pro Leu Thr
                15               20               25
ttt ttc tct gag cgg tat gaa tct gca aaa tca tcg atc agt gaa gat 387
Phe Phe Ser Glu Arg Tyr Glu Ser Ala Lys Ser Ser Ile Ser Glu Asp
                30               35               40
tta aca att att aaa caa acc ttt gaa cag cag ggg att ggt act ttg 435
Leu Thr Ile Ile Lys Gln Thr Phe Glu Gln Gln Gly Ile Gly Thr Leu
                45               50               55
ctt act gtt ccc gga gct gcc gga ggc gtt aaa tat att ccg aaa atg 483
Leu Thr Val Pro Gly Ala Ala Gly Gly Val Lys Tyr Ile Pro Lys Met
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aag cag gct gaa gct gaa gag ttt gtg cag aca ctt gga cag tcg ctg 531
Lys Gln Ala Glu Ala Glu Glu Phe Val Gln Thr Leu Gly Gln Ser Leu
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gca aat cct gag cgt atc ctt ccg ggc ggt tat gta tat tta acg gat 579
Ala Asn Pro Glu Arg Ile Leu Pro Gly Gly Tyr Val Tyr Leu Thr Asp
                95               100               105
atc tta gga aag cca tct gta ctc aag gta ggg aag ctg ttt gct 627
Ile Leu Gly Lys Pro Ser Val Leu Ser Lys Val Gly Lys Leu Phe Ala
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Lys	Gly	Ile	Pro	Leu	Ala	Tyr	Ala	Ala	Ala	Ser	Tyr	Leu	Asn	Val	Pro	
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Ser	Ile	Asn	Tyr	Val	Ser	Gly	Ser	Ser	Asn	Arg	Ile	Gln	Thr	Met	Ser	
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Asp	Phe	Met	Lys	Ala	Gly	Gly	Thr	Ile	Asn	Gly	Met	Ile	Asn	Leu	Leu	
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Asp	Glu	Phe	Asn	Ala	Asn	Val	Ala	Gly	Ile	Gly	Val	Leu	Val	Glu	Ala	
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gaa	gga	gta	gat	gaa	cgt	ctt	gtt	gac	gaa	tat	atg	tca	ctt	ctt	act	1011
Glu	Gly	Val	Asp	Glu	Arg	Leu	Val	Asp	Glu	Tyr	Met	Ser	Leu	Leu	Thr	
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Asn	Phe	Leu	Arg	Phe	Phe	Lys	Asp	Asn	Leu	Leu	Lys	Asn	Gly	Glu	Thr	
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gaa	tca	tgacaaaagc	agtcacacaca	aaacatgccc	cagcggcaat	cgggccttat										1163
Glu	Ser															
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<211> 285

<212> PRT

<213> Bacillus subtilis

<400> 12

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Ile	Leu	Pro	Gly	Gly	Tyr	Val	Tyr	Leu	Thr	Asp	Ile	Leu	Gly	Lys	Pro	
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Ser	Val	Leu	Ser	Lys	Val	Gly	Lys	Leu	Phe	Ala	Ser	Val	Phe	Ala	Glu	

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Arg	Glu	Ile	Asp	Val	Val	Met	Thr	Val	Ala	Thr	Lys	Gly	Ile	Pro	Leu
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Ser	Gly	Ser	Ser	Asn	Arg	Ile	Gln	Thr	Met	Ser	Leu	Ala	Lys	Arg	Ser
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<212> DNA

<213> Bacillus subtilis

<220>

<221> CDS

<222> (101)..(1393)

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gta gta ggt acg caa tgg ggc gat gaa gga aaa ggt aaa att aca gat	163					
Val Val Gly Thr Gln Trp Gly Asp Glu Gly Lys Gly Lys Ile Thr Asp						
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ttc cta tca gaa aat gca gaa gtg atc gcc cgt tat caa ggc gga aat	211					
Phe Leu Ser Glu Asn Ala Glu Val Ile Ala Arg Tyr Gln Gly Gly Asn						
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aac gca ggg cat aca atc aag ttt gac gga atc aca tat aag ctt cac	259					
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tta atc ccg tct gga att ttc tat aag gat aaa acg tgt gta atc gga	307					
Leu Ile Pro Ser Gly Ile Phe Tyr Lys Asp Lys Thr Cys Val Ile Gly						
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ctt cat gag cgc aac gtg agt aca gat aac ctg aga atc agc aac aga	403					
Leu His Glu Arg Asn Val Ser Thr Asp Asn Leu Arg Ile Ser Asn Arg						
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gct cac gtc att ctg ccg tat cat ttg aaa ttg gat gaa gtg gaa gaa	451					
	95					
	100					

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Pro	Ala	Tyr	Met	Asp	Lys	Ala	Ala	Arg	Ile	Gly	Ile	Arg	Ile	Ala	Asp	
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Leu	Leu	Asp	Arg	Asp	Ala	Phe	Ala	Glu	Lys	Leu	Glu	Arg	Asn	Leu	Glu	
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Glu	Lys	Asn	Arg	Leu	Leu	Glu	Lys	Met	Tyr	Glu	Thr	Glu	Gly	Phe	Lys	
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Leu	Glu	Asp	Ile	Leu	Asp	Glu	Tyr	Tyr	Glu	Tyr	Gly	Gln	Gln	Ile	Lys	
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Val	Gly	Val	Ser	Lys	Ala	Tyr	Thr	Thr	Arg	Val	Gly	Asp	Gly	Pro	Phe	
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Ala	Ser	Leu	Lys	Ala	Leu	Ala	Glu	Cys	Glu	Pro	Val	Tyr	Glu	Glu	Met	
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ccg	ggc	tgg	act	gag	gat	att	aca	ggt	gcg	aag	agc	ttg	agc	gag	ctt	1267
Pro	Gly	Trp	Thr	Glu	Asp	Ile	Thr	Gly	Ala	Lys	Ser	Leu	Ser	Glu	Leu	
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ccg	gaa	aat	gcg	cgc	cat	tat	ctt	gag	cgt	gtg	tct	cag	ctg	aca	ggc	1315
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gtc ctt cgc agt gtg tac cgt gcg aac taa atagaatatg tctgcaagcc 1413
Val Leu Arg Ser Val Tyr Arg Ala Asn
          425          430
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<210> 14  
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 <213> *Bacillus subtilis*

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Tyr Gln Gly Gly Asn Asn Ala Gly His Thr Ile Lys Phe Asp Gly Ile
          35          40          45
Thr Tyr Lys Leu His Leu Ile Pro Ser Gly Ile Phe Tyr Lys Asp Lys
          50          55          60
Thr Cys Val Ile Gly Asn Gly Met Val Val Asp Pro Lys Ala Leu Val
          65          70          75          80
Thr Glu Leu Ala Tyr Leu His Glu Arg Asn Val Ser Thr Asp Asn Leu
          85          90          95
Arg Ile Ser Asn Arg Ala His Val Ile Leu Pro Tyr His Leu Lys Leu
          100          105          110
Asp Glu Val Glu Glu Glu Arg Lys Gly Ala Asn Lys Ile Gly Thr Thr
          115          120          125
Lys Lys Gly Ile Gly Pro Ala Tyr Met Asp Lys Ala Ala Arg Ile Gly
          130          135          140
Ile Arg Ile Ala Asp Leu Leu Asp Arg Asp Ala Phe Ala Glu Lys Leu
          145          150          155          160
Glu Arg Asn Leu Glu Glu Lys Asn Arg Leu Leu Glu Lys Met Tyr Glu
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Thr Glu Gly Phe Lys Leu Glu Asp Ile Leu Asp Glu Tyr Tyr Glu Tyr
          185          190          195          200
Gly Gln Gln Ile Lys Lys Tyr Val Cys Asp Thr Ser Val Val Leu Asn
          205          210          215          220
Asp Ala Leu Asp Glu Gly Arg Arg Val Leu Phe Glu Gly Ala Gln Gly
          225          230          235          240
Val Met Leu Asp Ile Asp Gln Gly Thr Tyr Pro Phe Val Thr Ser Ser
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Asn Pro Val Ala Gly Gly Val Thr Ile Gly Ser Gly Val Gly Pro Thr
          265          270          275          280
Lys Ile Lys His Val Val Gly Val Ser Lys Ala Tyr Thr Thr Arg Val
          285          290          295          300
Gly Asp Gly Pro Phe Pro Thr Glu Leu Lys Asp Glu Ile Gly Asp Gln
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Arg Val Gly Trp Phe Asp Ser Val Val Val Arg His Ala Arg Arg Val

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Ile	Glu	Glu	Phe	Pro	Ala	Ser	Leu	Lys	Ala	Leu	Ala	Glu	Cys	Glu	Pro		
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Val	Tyr	Glu	Glu	Met	Pro	Gly	Trp	Thr	Glu	Asp	Ile	Thr	Gly	Ala	Lys		
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Ser	Leu	Ser	Glu	Leu	Pro	Glu	Asn	Ala	Arg	His	Tyr	Leu	Glu	Arg	Val		
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 Gly Ala Glu Lys Gly Gln Ile Ala Asp Thr Val Leu Leu Pro Gly Asp 20  
 10 15  
 cct ctc aga gca aaa ttt att gca gaa acg tat ctt gaa aat gta gaa 211  
 Pro Leu Arg Ala Lys Phe Ile Ala Glu Thr Tyr Leu Glu Asn Val Glu 25 30 35  
 tgc tac aat gaa gtc aga ggc atg tat gga ttt acg ggt aca tat aaa 259  
 Cys Tyr Asn Glu Val Arg Gly Met Tyr Gly Phe Thr Gly Thr Tyr Lys 40 45 50  
 ggt aaa aaa atc tca gta caa ggc acg gga atg gga gtt ccg tct att 307  
 Gly Lys Lys Ile Ser Val Gln Gly Thr Gly Met Gly Val Pro Ser Ile 55 60 65  
 tca att tat gtg aat gaa tta att caa agc tac gat gtg caa aat cta 355  
 Ser Ile Tyr Val Asn Glu Leu Ile Gln Ser Tyr Asp Val Gln Asn Leu 70 75 80 85  
 ata aga gtc ggt tcc tgc ggc gct att cgt aaa gat gtc aaa gtg cga 403  
 Ile Arg Val Gly Ser Cys Gly Ala Ile Arg Lys Asp Val Lys Val Arg 90 95 100  
 gac gtc att ttg gcg atg acc tcc tca act gat tca caa atg aac aga 451  
 Asp Val Ile Leu Ala Met Thr Ser Ser Thr Asp Ser Gln Met Asn Arg 105 110 115  
 gtt gct ttc gga agc gtt gat ttt gcg cct tgc gca gat ttc gag ctt 499  
 Val Ala Phe Gly Ser Val Asp Phe Ala Pro Cys Ala Asp Phe Glu Leu 120 125 130  
 tta aaa aat gcc tat gat gcc gca aag gat aaa ggt gtg ccg gtg act 547



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	135					140					145						
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Val	Gly	Ser	Val	Phe	Thr	Ala	Asp	Gln	Phe	Tyr	Asn	Asp	Asp	Ser	Gln		
150					155					160					165		
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Ile	Glu	Lys	Leu	Ala	Lys	Tyr	Gly	Val	Leu	Gly	Val	Glu	Met	Glu	Thr		
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Thr	Ala	Leu	Tyr	Thr	Leu	Ala	Ala	Lys	His	Gly	Arg	Lys	Ala	Leu	Ser		
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att	ctc	acc	gtg	agt	gat	cac	gta	tta	aca	gga	gaa	gaa	acg	aca	gcg	739	
Ile	Leu	Thr	Val	Ser	Asp	His	Val	Leu	Thr	Gly	Glu	Glu	Thr	Thr	Ala		
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Glu	Glu	Arg	Gln	Thr	Thr	Phe	His	Asp	Met	Ile	Glu	Val	Ala	Leu	His		
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<211> 233

<212> PRT

<213> Bacillus subtilis

<400> 16

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Thr	Gly	Thr	Tyr	Lys	Gly	Lys	Ile	Ser	Val	Gln	Gly	Thr	Gly	Met			
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			100					105					110				
Ser	Gln	Met	Asn	Arg	Val	Ala	Phe	Gly	Ser	Val	Asp	Phe	Ala	Pro	Cys		
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			165					170						175			
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		195					200					205					
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